

AMENDMENTS TO THE SPECIFICATIONIN THE SPECIFICATION:Page 5

Please amend the paragraph on page 5 beginning at line 9 as follows:

A first embodiment of the invention relates to a copolymerized polyester resin (A) containing 45 to 99% by mole of an oxycarboxylic acid unit having 5 carbon atoms or less based on 100% by mole of the total constituent units of the polyester resin, and containing the oxycarboxylic acid unit having 5 carbon atoms or less, an aromatic dicarboxylic acid unit and an aliphatic diol unit having 4 carbon atoms or less in a total amount of 95% by mole or more, wherein the relationship between the content of the oxycarboxylic acid unit, expressed as M% by mole, and the density of the polyester resin, expressed as  $\rho$  (kg/m<sup>3</sup>), satisfies the formula:  $\rho \geq 1349 + M \times 0.85$ .

Please amend the paragraph on page 5 beginning at line 21 and continuing on page 6 as follows:

Further, a preferred embodiment of the polyester resin (A) of the invention is preferably such that the relationship between the content of the oxycarboxylic acid unit, expressed as M% by mole, and the carbon dioxide permeability coefficient, expressed as PCO<sub>2</sub> (ml·mm/m<sup>2</sup>·day·atm), satisfies the formula: PCO<sub>2</sub>  $\leq 2.7 - M \times 0.023$ . In particular, the oxycarboxylic acid unit having 5 carbon atoms or less in the polyester is preferably glycolic acid unit. Further, the aromatic dicarboxylic acid unit in the polyester of the invention is preferably an isophthalic acid unit and/or a 2,6-naphthalenedicarboxylic acid unit and/or a terephthalic acid unit, and among these, the isophthalic acid unit is particularly preferred.

Page 7

Please amend the paragraph on page 7 beginning at line 22 and continuing on page 8 as follows:

The polyester resin (A) of the present invention is a polyester resin containing 45 to 99% by mole of an oxycarboxylic acid unit having 5 carbon atoms or less based on 100% by mole of the total constituent units of the polyester resin, and containing the oxycarboxylic acid unit having 5 carbon atoms or less, an aromatic dicarboxylic acid unit and an aliphatic diol unit having 4 carbon atoms or less in a total amount of 95% by mole or more, wherein the relationship between the content of the oxycarboxylic acid unit, expressed as M% by mole, and the density of the polyester resin, expressed as  $\rho$  (kg/m<sup>3</sup>), satisfies the formula:  $\rho \geq 1349 + M \times 0.85$ . The aromatic dicarboxylic acid unit and the aliphatic diol unit having 4 carbon atoms or less are usually contained in an amount of 0.5 to 27.5% by mole, preferably 1 to 20% by mole, and more preferably 1 to 15% by mole, based on 100% by mole of the total constituent units of the polyester resin (A).

Page 9

Please amend the paragraph on page 9 beginning at line 3 as follows:

The aromatic dicarboxylic acid to be used for the invention may be exemplified by aromatic dicarboxylic acid having 8 to 12 carbon atoms. Specifically, mention may be made of isophthalic acid, terephthalic acid, phthalic acid, 2,6-naphthalenedicarboxylic acid or the like. These aromatic dicarboxylic acids may be used individually or in combination of two or more species. Among these aromatic dicarboxylic acids, at least one selected from isophthalic acid, 2,6-naphthalenedicarboxylic acid and terephthalic acid is preferred in view of obtaining a

polyester having excellent gas barrier property and mechanical properties. In particular, it is preferable to use isophthalic acid.

Please amend the paragraph on page 9 beginning at line 15 as follows:

The aliphatic diol ~~unit~~ having 4 carbon atoms or less to be used for the invention may be exemplified by ethylene glycol, diethylene glycol, 1,2-propanediol, 1,3-propanediol, 1,4-butanediol or the like. These aliphatic diols may be used individually or in combination of two or more species. Among these, ethylene glycol is preferred.

Please amend the paragraph on page 9 beginning at line 21 as follows:

The polyester resin molded product which is laminated with the layer comprising the crystalline polyester resin (B) employs ethylene glycol as the aliphatic diol ~~unit~~ having 4 carbon atoms or less. The aromatic dicarboxylic acid and ethylene glycol are usually contained in an amount of 0.5 to 27.5% by mole, preferably 1 to 20% by mole, and more preferably 1 to 15% by mole, based on 100% by mole of the total constituent units of the polyester resin (A).

Page 10

Please amend the paragraph on page 10 beginning at line 21 as follows:

The polyester resin (A) of the invention contains the above-described oxycarboxylic acid unit, aromatic dicarboxylic acid unit and aliphatic diol unit having 4 carbon atoms or less, usually in a total amount of 95% by mole or more, preferably 97% by mole or

more, and more preferably 99% by mole or more. By copolymerizing the oxycarboxylic acid ~~unit~~, the aromatic dicarboxylic acid ~~unit~~ and the aliphatic diol ~~unit~~ having 4 carbon atoms or less in an amount within the above-described range, a polyester resin having a high degree of gas barrier property, practical resistance to hydrolysis, high miscibility and adhesiveness with other polyester resins, particularly with polyethylene terephthalate, can be provided, which is desirable. Further, the polyester resin is also desirable from the viewpoint that when the laminate is reprocessed by molding, the decrease in transparency is less and recyclability is excellent.

Please amend the paragraph on page 10 beginning at line 4 and continuing on page 11 as follows:

The polyester resin of the invention may also contain ~~the units~~ monomers listed below in addition to the oxycarboxylic acid, aromatic dicarboxylic acid and aliphatic diol having 4 carbon atoms or less, as long as the composition does not go beyond the range. Examples of the dicarboxylic acid ~~unit~~ which may be contained include, specifically, aliphatic dicarboxylic acids such as oxalic acid, malonic acid, succinic acid, fumaric acid, maleic acid, glutaric acid, adipic acid, sebacic acid, azelaic acid and decanedicarboxylic acid; and alicyclic dicarboxylic acids such as cyclohexanedicarboxylic acid. Examples of the diol ~~unit~~ which may be contained include, specifically, aliphatic diols such as 1,6-hexanediol, neopentyl glycol, dodecamethylene glycol, triethylene glycol and tetraethylene glycol, alicyclic diols such as cyclohexanedimethanol and isosorbide; and aromatic group-containing diols such as 1,3-bis(2-hydroxyethoxy)benzene, 1,2-bis(2-hydroxyethoxy)benzene, 1,4-bis(2-hydroxyethoxy)benzene, bis[4-(2-hydroxyethoxy)phenyl]sulfone, 2,2-bis(4- $\beta$ -hydroxyethoxyphenyl)propane, bisphenols, hydroquinone and resorcin.

Page 12

Please amend the paragraph on page 12 beginning at line 15 as follows:

The polyester resin of the invention is characterized in that the relationship between the content of the oxycarboxylic acid-unit, expressed as M% by mole, and the density of the polyester resin, expressed as  $\rho$  ( $\text{kg}/\text{m}^3$ ), satisfies the formula:  $\rho \geq 1349 + M \times 0.85$ . The polyester conforming to such relationship is excellent in the balance between the gas barrier property and the mechanical properties and thus, is particularly suitable when used as a packaging material such as bottles and films. Here, the density  $\rho$  is a value measured after drying pellets obtained by quenching a molten polyester resin in ice water, under reduced pressure at room temperature for 24 hours, using a density gradient column by means of a tetrachlorocarbon-heptane solution at 23°C; while M is a value determined by measuring a 400 MHz proton nuclear magnetic resonance spectrum in a deuterated chloroform solution.

Page 14

Please amend the paragraph on page 14 beginning at line 7 as follows:

The polyester resin (A) of the invention is preferably such that the relationship between the content of the oxycarboxylic acid unit, expressed as M% by mole, and the carbon dioxide permeability coefficient, expressed as  $\text{PCO}_2$  ( $\text{ml}\cdot\text{mm}/\text{m}^2\cdot\text{day}\cdot\text{atm}$ ) satisfies the formula:  $\text{PCO}_2 \leq 2.7 - M \times 0.023$ . Here, the carbon dioxide permeability coefficient is a value measured at 25°C using a GPM-250 apparatus manufactured by GL Sciences, Inc. after molding a polyester resin into a press film.

Page 26

Please amend the paragraph on page 26 beginning at line 11 as follows:

Dicarboxylic ~~acid acids~~ units which may be contained: aromatic dicarboxylic acids such as phthalic acid, isophthalic acid, 2,6-naphthalenedicarboxylic acid, 2,7-naphthalenedicarboxylic acid, 1,4-naphthalenedicarboxylic acid, 4,4'-sulfonebisbenzoic acid, 4,4'-biphenyldicarboxylic acid, 4,4'-sulfidobisbenzoic acid, 4,4'-oxybisbenzoic acid, and diphenoxylethanedicarboxylic acid; aliphatic dicarboxylic acids such as malonic acid, succinic acid, glutaric acid, fumaric acid, maleic acid, adipic acid, sebacic acid, azelaic acid, and decanedicarboxylic acid; alicyclic dicarboxylic acids such as cyclohexanedicarboxylic acid.

Page 27

Please amend the paragraph on page 27 beginning at line 8 as follows:

Hydroxycarboxylic ~~acid acids~~ units which may be contained: glucolic acid, diglucolic acid, lactic acid, 3-hydroxybutyric acid, p-hydroxybenzoic acid, m-hydroxybenzoic acid, p-hydroxymethylbenzoic acid, m-hydroxymethylbenzoic acid, p-(2-hydroxyethyl)benzoic acid, and m-(2-hydroxyethyl)benzoic acid.

Page 37

Please amend the paragraph on page 37 beginning at line 21 and continuing on page 38 as follows:

A transesterification reaction was carried out using 122.1 parts by weight of dimethyl 2,6-naphthalenedicarboxylate, 62.1 parts by weight of ethylene glycol and 0.06 parts by

weight of manganese acetate at a temperature of 160°C to 220°C, while distilling methanol out. Subsequently, an esterification reaction was carried out in the same manner as in Example 1 with 4.1 parts by weight of the product obtained from the transesterification reaction and 100 parts by weight of glycolic acid (6 hours). ~~Subsequently, an esterification reaction was carried out (6 hours) according to a predetermined method with 4.1 parts by weight of the product obtained from the previous reaction and 100 parts by weight of glycolic acid.~~ Thereafter, 0.38 parts by weight of a germanium-based catalyst (containing 6.7% by weight of germanium dioxide) was added, and the reaction was carried out for 7.5 hours according to the predetermined method.

Page 42

Please amend the paragraph on page 42 beginning at line 3 as follows:

A binary trilayer film was obtained in the same manner as in Example 4~~6~~, except that the polyglycolic acid of Comparative Example 1 was used instead of the polyester of Example 1, and the cylinder temperature was set to 240°C to 220°C. The obtained film was opaque, and the individual layers easily delaminated upon introduction of notches. Thereafter, the obtained multilayer film was attemptively subjected to biaxial orientation in the same manner as in Example 4, but the drawability was poor, while the film could not be molded into drawn film.

Page 46

Please amend the paragraph on page 46 beginning at line 16 as follows:

Subsequently, molding of a container was carried out in the same manner as in Example 4<sup>7</sup>, except that GT96 was used instead of GI70, and the cylinder temperature of GT96 was set at 210 to 220°C. The properties of the resulting container are presented in Table 4.

Page 47

Please amend the paragraph on page 47 beginning at line 16 as follows:

Subsequently, molding of a container was carried out in the same manner as in Example 4<sup>7</sup>, except that PGA was used instead of GI70, and the cylinder temperature for PGA was set at 230°C. The properties of the resulting container are presented in Table 4.

Page 50

Please amend the paragraph on page 50 beginning at line 17 and continuing on page 51 as follows:

Subsequently, using a biaxial orientation blow molding machine (Sidel SA: SBO LAB), the body of the preform which had undergone crystallization of the end of the opening was heated to 110°C with an infrared heater, and compressed air was blown into the blow mold where the mold temperature was set at 150°C, to mold a ~~laminated~~ container having a volume of 500 ml. The draw ratio was about 7 (approximately 2.2 in the axial direction, and approximately 3.2 in the peripheral direction). The container molded by blow molding was closely attached to the mold for 10 seconds, and the entire body of the container was subjected to thermal setting. Thereafter, cooling air was blown into the container for 3 seconds, and the container was taken out of the mold. The properties of the obtained container are presented in Table 4.

Page 51

Please amend Table 3 on page 51 as follows:

[Table 3]

	Ex 7 (GI70)	Ex 8 (GI90)	Ex 9 (GI95)	Ex 10 (GI98)	Ex 11 (GT96)	Ex 12 (GN98)	Comp.Ex3 (PGA)
Density [kg/m <sup>3</sup> ]	1426	1473	1497	1502	1495	1492	1590
Reduced viscosity IV [dL/g]	0.64	0.77	0.67	0.63	1.0	0.75	Insoluble
Glass transition temperature [°C]	41.0	38.8	38.3	37.6	38.6	41.7	(43) <sup>*1</sup>
Cold crystallization temperature [°C]	-	-	123.6	106.2	137.8	142.8	-
Melting point [°C]	-	-	195.6	208.0	186.9	189.6	222.9
Heat of fusion [J/g]	-	-	52.9	68.9	10.1	8.7	76.7
Comp. <sup>*4</sup>	Glycolic acid [mol%]	71.2	86.9	94.8	97.9	94.8	100 <sup>*2</sup>
	Aromatic dicarboxylic acid	IA	IA	IA	IA	TA	26NDA 26NDA
1349+0.85*M	1410	1423	1430	1432	1430	1430	1434
Carbon dioxide permeability coefficient <sup>*3</sup>	0.85	0.3	0.2	0.15	0.25	0.17	0.1
Oxygen permeability coefficient <sup>*3</sup>	0.34	0.1	0.06	0.05	0.08	0.05	0.03